CLAIMS

1. A process comprising:

applying a polymer film to a transparent substrate;

conditioning the polymer film; and

imprinting a plurality of microgrooves in the polymer film by pressing a tool against the polymer film, the tool having a pattern including a plurality of microgrooves formed in a surface thereof.

2. The process of claim 1 wherein the polymer film comprises a polyimide (PI) or a polyvinylalcohol (PVOH).

3. The process of claim 1 wherein the transparent substrate comprises glass.

4. The process of claim 1 wherein applying the polymer film to the transparent substrate comprises spraying or spin-coating the polymer film onto the transparent substrate.

5. The process of claim 1 wherein the plurality of microgrooves in the pattern have a selected profile.

6. The process of claim 5 wherein the selected profile is a square profile, a triangular profile, a spaced triangular profile, or a combination thereof.

7. The process of claim 1 wherein conditioning the polymer film comprises raising the temperature of the polymer film.

8. The process of claim 1 wherein conditioning the polymer film comprises at least partially curing the polymer film.

9. The process of claim 1 wherein conditioning the polymer film comprises doing nothing.

10. The process of claim 1, further comprising oscillating the tool in the plane of the polymer film.

11. The process of claim 10 wherein the microgrooves have an abrasive material embedded therein.

12. A process comprising:

providing a transparent substrate having a polymer film applied on one side thereof;

providing a tool having a contact surface, the contact surface having a plurality of microgrooves formed thereon;

pressing the contact surface against the polymer film.

13. The process of claim 12 wherein the polymer film comprises a polyimide (PI) or a polyvinylalcohol (PVOH).

14. The process of claim 12 wherein the transparent substrate comprises glass.

15. The process of claim 12 wherein the plurality of microgrooves have a selected profile.

16. The process of claim 15 wherein the selected profile is a square profile, a triangular profile, a spaced triangular profile, or a combination thereof.

17. The process of claim 15, further comprising conditioning the polymer film.

18. The process of claim 17 wherein conditioning the polymer film comprises raising the temperature of the polymer film.

19. The process of claim 17 wherein conditioning the polymer film comprises at least partially curing the polymer film.

20. The process of claim 17 wherein conditioning the polymer film comprises doing nothing.

21. A process comprising:

providing a transparent substrate having a polymer film applied on one side thereof;

providing a tool having a contact surface, the contact surface having a plurality of microgrooves formed thereon;

pressing the contact surface against the polymer film; and

oscillating the contact surface in a plane of the polymer film.

22. The process of claim 21 wherein the polymer film comprises a polyimide (PI) or a polyvinylalcohol (PVOH).

23. The process of claim 21 wherein the transparent substrate comprises glass.

24. The process of claim 21 wherein the plurality of microgrooves have a selected profile.

25. The process of claim 24 wherein the selected profile is a square profile, a triangular profile, a spaced triangular profile, or a combination thereof.

26. The process of claim 21, further comprising conditioning the polymer film.

27. The process of claim 21 wherein conditioning the polymer film comprises raising the temperature of the polymer film.

28. The process of claim 21 wherein conditioning the polymer film comprises at least partially curing the polymer film.

29. The process of claim 21 wherein conditioning the polymer film comprises doing nothing.